

## DOCKETED

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**Comments of the Sacramento Municipal Utility District on Staff Proposal for Draft Data Regulations for Implementing SB 350 and AB 802**

*Additional submitted attachment is included below.*

**STATE OF CALIFORNIA  
BEFORE THE CALIFORNIA ENERGY COMMISSION**

In the matter of,	)	Docket No. 16-OIR-03
	)	
<i>Developing Regulations, Guidelines, and</i>	)	SMUD Comments On Staff Revised
<i>Policies for Implementing SB 350 and</i>	)	Proposal for Draft Regulations
<i>AB 802</i>	)	
_____	)	December 12, 2016

**Comments of the Sacramento Municipal Utility District  
on Staff Proposal for Draft Data Regulations for Implementing  
SB 350 and AB 802**

Thank you for the opportunity to provide comments on the Proposed Language for Discussion at the November 16, 2016, Workshop (Proposed Language), intended to update the California Energy Commission’s (CEC) Title 20 data collection regulations to support the implementation of Senate Bill No. 350 (SB 350), Assembly Bill No. 802 (AB 802), and improved energy analytics at the CEC. SMUD appreciates the potential need for some updating of data requirements to enable the CEC to implement new legislation and the general need for increased data analytics as the utility world becomes more distributed and interconnected.

SMUD also appreciates the changes and clarifications that CEC staff has made between the initial draft language posted on September 22, 2016 (Draft Language) and the Proposed Language which was made available for the November 16, 2016 workshop. In particular, SMUD appreciates the changes described below:

- Clarification that in Section 1344(c)(2) [as renumbered in the Proposed Language] the requirement is for aggregated customer hourly load data, rather than hourly load data for each customer.
- Communication by CEC staff in stakeholder meetings that the CEC will work with transmission owners and stakeholders to ensure a reasonable and workable definition of “subareas” for provision of data under Sections 1344 (f) and (g) [again, as renumbered]. In the current data regulations, subareas are those used by transmission system owners, rather than specified by the CEC as in the Proposed Language.
- A change to Section 1344(g) that provides a reasonable threshold of one percent (1%) of system peak before any requirement that a utility estimate hourly behind the meter load shapes and impacts for any specific “load modifier,” such as “hourly storage systems using onsite

generation”. SMUD expects that as the different types of behind the meter load modifiers grow, there will come a time when understanding the impact of these systems on the overall system load forecast and load shape will be increasingly important.

Finally, SMUD appreciates the informal dialogue with CEC staff and other stakeholders that has resulted in some of the proposed changes above as well as developing a deeper understanding amongst stakeholders about the underlying need for the proposed data regulation changes. SMUD encourages further dialogue on specific issues not yet discussed in detail, and supports the general comments made at the November 16, 2016, workshop that one or more “working groups” be convened to facilitate stakeholder discussion of the perceived data needs at the CEC, and how those needs could best be met through data from other sources, revised data regulations, and voluntary or survey-developed sources.

However, SMUD still believes that the Proposed Language as modified still represents a vast increase in required data that may not be necessary and that comes with significant administrative burdens and customer confidentiality concerns. Hence, SMUD continues to oppose several proposed changes, as described below.

Again, although AB 802 gave the CEC authority to require submittal of very detailed data, at the customer and hourly level, SMUD believes a rational basis for requiring such data to support CEC policies is needed prior to exercising this authority. There remain significant customer privacy concerns with the revised Proposed Language that are not present in the “aggregate” level of data currently provided.

Specific comments on sections of the Proposed Language are:

**Section 1302:** In Section 1302, the added definition number 67 for “EVSE” is overly broad. The equipment commonly known as an EVSE, or “electric vehicle service equipment,” typically does not include all of the “... conductors, plugs, fittings, and other hardware purposed to deliver energy from the electric grid to the vehicle.” The EVSE is most often installed on consumer premises on the consumer side of the meter, and the connections from the meter to the vehicle are typically not defined as part of the “electric grid.” Quite often, an electric vehicle purchaser will simply plug into an already existing outlet in their home, and this outlet is not normally considered part of the EVSE. SMUD recommends altering the proposed definition as follows:

(66) “EVSE” means electric vehicle service equipment and refers to equipment associated with charging electric drive vehicles. It encompasses all of the conductors, plugs, fittings, and other hardware purposed to deliver energy from the electric grid to the vehicle, not including internal or external conductors, plugs, fittings or other hardware prior to the point where the EVSE is hardwired to premises or plugged into an outlet.

**Section 1304:** Section 1304(b) of the Proposed Language still removes the 100 kW limit on the required reports from utility distribution companies (UDCs) about power plants located in the UDC service area, as proposed in the September 22, 2016, Draft Language. This remains a significant concern to SMUD, as it would be a vast increase in reporting on these systems, including residential sized systems down at the level of 1 kW or less. Rather than addressing this concern, the Proposed Language contains revisions from the Draft Language that require even more information about very small systems installed on UDC grids.

During the workshop on September 26, 2016, CEC staff mentioned that the 100 kW limit misses about 99% of all systems installed and that other limits, such as 10 kW or 5 kW, would still miss the majority of installed systems. SMUD suggests that the number of systems is not the relevant factor for consideration of this limit. Smaller residential systems may be more numerous, but their small size means that they are less impactful on the system, and hence do not need to be individually included in the type of system analysis that the CEC may have in mind. The 100 kW limit likely captures more than 50% of the behind the meter photovoltaic (PV) capacity installed on the system, as well as all of the larger utility grid level systems, so it captures the vast majority of all capacity installed. Moving to a lower limit, particularly down to the residential system level, merely adds data without adding any real usefulness. This group of resources can continue to be effectively captured in aggregate form as in the current Senate Bill No. 1 reports provided to the CEC every July 1<sup>st</sup>. Alternatively, regular random sample surveys targeting smaller solar systems installed on residential and commercial premises can provide the intelligence needed for the CEC's purposes.

Addition of energy storage systems in Section 1304(b) is premature at this point, given the very small penetration of these resources. For example, SMUD has only one active battery storage installation that can export to the grid, sized at 36 kW/72 kWh. This system is generally indistinguishable from background energy efficiency in the distribution grid where it is located. There are no more than a couple dozen other SMUD customers that have small PV integrated battery storage, but none are designed to export to the utility. SMUD has also received applications for a handful of behind the meter PV systems with storage, but these designs are listed as "non-export." In this configuration, these small battery systems are no different than thousands of behind the meter interruptible power supplies (UPS) that utility customers (such as data centers) have been using for the past 30 years. The detailed reporting contemplated in Section 1304(b) is unnecessary unless and until the technology and economics change significantly.

In addition, while UDCs will know about storage systems that are installed as part of utility pilot programs or utility procurements, knowledge of storage systems installed by residential customers is not guaranteed or even necessarily common. Again, information derived from utility pilots and storage procurements, along with random sample surveys as necessary, seems sufficient here.

The details of these regulations simply do not make sense at levels below the 100 kW level. Section 1304(b)(1) requires UDCs to provide the “name” of the installed “power plant.” There is no “naming convention” that is in place for residential PV systems (or storage systems). Section 1304(b)(6) requires provision of the “power plant owner’s legal name and address of the principal place of business ....” There are confidentiality concerns in providing residential and small commercial names and addresses. In addition, in a substantial and increasing number of cases, the legal owner will not be the resident or premise occupant, but rather the solar company that installed the system or some other third party. UDCs are not likely to have good information, if any, about legal ownership of these systems. Section 1304(b)(7) requests longitude and latitude information, if available. Such information is available for larger power plants, but not likely available for smaller power plants.

The additional information requested in the Proposed Language in comparison to the Draft Language – Sections 1304(b) (11)-(15) is ambiguous. It is not clear how knowing the “tariff” in place for an installed power plant will be useful for forecasting. For the larger systems currently covered by Section 1304, it is not clear that the tariff information makes any sense – these systems are not necessarily installed under any “tariff.” For smaller systems that, for example, may be installed under a net metering tariff, it is not clear how that reported knowledge helps forecasting when future tariffs are changeable and unknown. Information about whether or when a particular system was removed, as envisioned in Section 1344(b)(14) and (15), is simply not available from UDCs in almost all cases – there is no policy in place for UDCs to be informed of disconnections. In addition, the vast majority of PV systems installed are robust and long-lived systems, so that system removals are quite uncommon. The amount of data available here is likely to be so unavailable and so small that it will be of no use to the CEC.

Given all these issues and concerns, SMUD suggests the following:

- Convene a working group to help understand what kind of data is available, how robust that availability is, how easy or difficult it is to collect and include such data, and what the CEC actually needs in order to produce better forecasts and serve other projects that may be of interest.
- Until that working group has provided input to the process, do not lower the threshold on generation resources below 100 kW. One task of the working group should be to understand how potential alternative thresholds would or would not provide sufficient data to assist the CEC’s needs and interests. The number of systems covered is not necessarily the best metric for this purpose.
- Remove the recently added provisions 1304(b)(12), (14), and (15). Again, the working group can help determine if any information in these areas would be useful for the CEC’s data needs and projects.

- Do not include energy storage systems in Section 1304(b) at this time. Other than the utility pilot and procurement projects, there is not likely to be sufficient installations of storage, or sufficient knowledge about those installations, to make collection of data in this area valuable on a biannual (twice a year) basis. The utility pilot and procurement information can be provided outside of the data regulation process.

**Section 1306:** In Section 1306, the Proposed Language still contains the new Section 1306(b) that represents again a vast expansion of data required to be reported for UDC's with greater than 1000 MW peak demand. Rather than the current requirement for quarterly load data, aggregated by customer type, the Proposed Language would require *monthly* sales for *each* customer, and include detailed information for each of these customers, including address; monthly bill; some code about participation in energy efficiency programs; information about whether or not the customer has an on-site PV system; a registered plug-in electric vehicle; an EVSE installed at the premises; the date of that installation; and whether and when an energy storage system is installed on-site. This information is inexplicably asked for twice, once for "sales" and once for "deliveries." SMUD is unsure of the difference for most, if not all, customers and believes this may be duplicative.

First, providing monthly sales and bill data for each customer is not necessary for any kind of forecasting or long term policy determination. Utilities do not forecast individual customer loads or base long term policies or programs on such information. Doing such on an individual customer basis would be enormously expensive and would provide little to no forecasting value. There is so much random variation at an individual customer premise level that forecasting at that level is not beneficial. Any customer can have loads that increase or decrease based on individual economic or demographic data at the site – who is living there, if anyone, what their changing economic circumstances are, and what changes randomly occur in the equipment they have installed and their pattern of usage of that equipment. The CEC should not undertake any kind of forecasting or energy policy development based on individual customer data – aggregate data is perfectly sufficient and, in fact, more useful for these purposes.

Second, this requirement represents a vast expansion of the amount of confidential data the CEC would be handling on an annual basis. SMUD and other EDUs take very seriously the confidentiality of our customers' data and only provide that data in limited circumstances when it is required, and we are reasonably assured that the data will remain confidential. Since there is no legitimate forecasting purpose for the data, SMUD is concerned about other purposes the CEC may have for use of the data, and whether those potential uses will amount to a violation of data confidentiality.

Third, the requested data – such as detailed customer level data requested about customers' on-site generation, electric vehicle ownership by type (leased/owned), presence or not of an EVSE and when that was installed, and presence or not of an energy storage system and similar information -- is information that is not

necessarily available to the EDU. Particularly for electric vehicles, EDUs will not have complete information about whether any individual customers have these cars, or whether they own or lease them. EVs are purchased or leased by customers at auto dealers or from other owners, and notification of the customer's utility is not normally part of the transaction. Utilities typically do not get informed if a customer installs an EVSE, either using an electrician or on their own. In many cases, the customer with an EV may simply plug the car into an outlet in their garage or carport. Getting this data for each customer is not necessary for any purpose, as aggregate and survey data is sufficient to develop forecasts and policies related to these distributed energy resources.

Information about participation in an EE program also does not seem helpful, as such participation can vary significantly, and may result in zero to substantial savings at the site. These savings may have happened years or even decades ago, may have decayed over time, may be masked in overall usage at the site by other site changes, or may not have even occurred yet. In short, it is unclear how to identify "... energy efficiency program participation..." in this dataset, and also unclear what possible use the data could be to the CEC.

Given all these issues and concerns, SMUD suggests the following:

- Convene a working group to help understand what kind of data is available, how robust that availability is, how easy or difficult it is to collect and include such data, and what the CEC actually needs in order to produce better forecasts and serve other projects that may be of interest.
- Do not require monthly, customer level data at this time. The working group should help to determine what level of data best balances confidentiality concerns, administrative burden, and additional data that may be needed by the CEC to improve forecasting or other programs and projects.
- Do not require EDUs to provide information that EDUs are unlikely to have or is unlikely to be useful, such as identifiers for PEVs, EVSEs, dates of EVSE installations, energy storage ownership information and dates of installation, and energy program participation information. The working group should help identify the best method for collecting information about these growing and changing loads and resources, considering random sample surveys and other sources of information, and help to understand the need for and best use of this information.

**Sections 1307-1308:** In Sections 1307 and 1308, there are new proposed provisions for natural gas utilities and pipelines that deliver more than 200 million therms of natural gas annually. Technically, SMUD appears to meet the definition of "gas utility" because it delivers more than 200 million therms annually to four power plants that are owned and operated by joint powers authorities (JPAs), of

which SMUD is a member. SMUD sells gas to no other customers. Thus, SMUD is in a unique situation, unlike the common understanding of a gas utility that has retail end-use customers. Moreover, SMUD already reports to the CEC the annual natural gas delivered to our power plants. Since the CEC already has this information, and because much of the detailed data is only relevant to typical retail customers, SMUD suggests that an exemption or changed definition be included to reflect SMUD's unique natural gas utility circumstances. SMUD had the impression from the November 16, 2016, Workshop that such an exemption or definition change made sense and hopes to see this change in the next draft of the regulatory language.

**Section 1343:** SMUD's main concern with Section 1343 of the Proposed Language involves the timing and costs of the first residential survey, due by July 1, 2019. A survey plan would be due to the CEC 18 months earlier, and it is unclear if this provides sufficient time for an EDU to develop and submit a survey plan for approval after the adoption of the proposed regulations and any subsequent CEC notification that a survey implementation project has begun. One problem here is that an EDU will not necessarily know the cost of participation in the CEC survey implementation plan prior to having to develop and submit an alternative plan. There were no changes in this area in the Proposed Language in comparison to the September 22 draft, but SMUD understood from stakeholder discussion meetings that CEC staff would be looking at the dates proposed in the regulatory language and accommodating reasonable concerns about timing.

**Section 1344:** SMUD continues to have concerns in Section 1344, while appreciating the changes and clarifications noted above for Sections 1344(c)(2), (f) and (g).

First, Section 1344(g) of the Proposed Language includes new reporting requirements for hourly load estimates by "load modifier" and subarea on pages 52-53. The term "load modifier" is not defined in the Proposed Language, but SMUD understands this to refer to a variety of distributed energy resources, such as behind the meter generation, storage systems, and electric vehicles, with expected disaggregation of the hourly load estimates by various types of these resources, as discussed in the Proposed Language. A definition would add clarity to the proposed regulations.

Second, SMUD again expresses appreciation about the addition in the Proposed Language of a reasonable threshold of one percent (1%) of system peak before any requirement takes effect that a utility estimate hourly behind the meter load shapes and impacts for any specific "load modifier." However, as mentioned in the November 16, 2016, Workshop, the timing of when the obligation to do these estimates in relation to the 1% threshold is infeasible. The requirement to estimate load shapes should apply two years after the 1% threshold is reached, providing some time to verify that installations of the specific load modifier have clearly gone above the threshold and then time to prepare and submit an estimate of the load shape for that modifier. SMUD notes that it is not clear that EDUs will have data about many of these installations as a matter of course, so some degree of estimation may need to be included in determining

when the threshold is reached. For example, SMUD does not necessarily explicitly track light-duty plug-in on-road electric vehicle load information, as would be required in subparagraph (g)(2)(D). SMUD's limited number of sub-metered PEV installations are being phased out, and most new installations will be using whole house metering. Even in these cases, SMUD may not have clear information about the presence or not of a PEV on the premises.

Third, Section 1344(h) of the Proposed Language contains a requirement for networked EVSE providers to provide, or authorize access to, specified information to the CEC. SMUD would likely be subject to this requirement due to our DC Fast Charge stations, resulting in significant data collection and data privacy concerns. Similar or identical data is also being collected and provided to the National Renewable Energy Laboratory (NREL). The CEC should avoid duplication and use the data already being collected as much as possible, where sufficient for its needs. This is another area where a working group could help in identifying what data makes sense to gather, whether that data is already being provided to another agency or institute, whether the CEC can get access to that data sufficiently, and how needed data can be gathered without presenting an undue barrier to development of the networked charging infrastructure in the state, which may hold back electric vehicle development.

The requirement for reporting as "frequently as possible for the electric vehicle station equipment or at least daily," would also seem to be unnecessary for policy development purposes. Given that hundreds of thousands charging actions can take place at any given time in California, the ability to analyze this data requires adequate time to review the data to draw conclusions. Requesting data be reported at time steps that are significantly faster than the data can be analyzed does not lead to better policy development and would drive costs higher to provide data at this frequency. Monthly reporting of this type of data would seem more appropriate.

Fourth, Section 1344(i) of the Proposed Language imposes a new requirement that larger UDCs provide all of the interval meter data for each customer, along with explanatory information about data quality, missing data, etc. This is a vast expansion of data reporting, appears to duplicate some of the earlier vast increases in the Proposed Language, and is again seemingly, at this level of detail, not necessary or useful for any system planning, forecasting, or energy policy tasks. In addition, March 15 each year is way too soon for this kind of data to be available with all missing data, misread data, etc. fixed and explanations of those efforts included in the submittal.

**Sections 1382, 1385:** SMUD's main concerns with the wind reporting changes in Sections 1382 and 1385 of the Proposed Language is that the changes proposed are not in all cases easily available, relevant on a going forward basis, or important for any policy purpose. SMUD suggests that a working group of wind project developers, managers, owners, and contractors be convened to examine the proposed regulatory language and recommend changes that achieve the CEC's needs with minimum cost and burden.

Thanks again for the opportunity to comment on the Draft Regulations.

/s/

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cc: Corporate Files (LEG 2016-1022)